

CLAIMS

1. A method of conditioning an activated sludge in a membrane biological reactor comprising
(i) adding to the activated sludge an effective amount of at least one water soluble cationic
polymer to form a mixture of water and coagulated and flocculated suspended solids; and
5 (ii) separating the coagulated and flocculated suspended solids from the water by filtering
through an ultrafiltration or microfiltration membrane.

2. The method of claim 1 wherein the water soluble cationic polymer has a molecular weight of
about 10,000 to about 2,000,000.

10 3. The method of claim 1 wherein the water soluble cationic polymer has a cationic charge of at
least 70 mole percent.

15 4. The method of claim 3 wherein the water soluble cationic polymer is a polymer of
(meth)acrylamide and one or more cationic monomers selected from diallyldimethylammonium
chloride, dimethylaminoethylacrylate methyl chloride quaternary salt,
dimethylaminoethylmethacrylate methyl chloride quaternary salt and dimethylaminoethylacrylate
benzyl chloride quaternary salt.

20 5. The method of claim 3 wherein the water soluble cationic polymer is
diallyldimethylammonium chloride/acryamide copolymer.

6. The method of claim 1 wherein the water soluble cationic polymer has a cationic charge of
100 mole percent.

7. The method of claim 6 wherein the water soluble cationic polymer is selected from the group consisting of *polydiallyldimethylammonium chloride*, *polyethyleneimine*, *polyepiamine*, *polyepiamine crosslinked with ammonia or ethylenediamine*, *condensation polymer of ethylenedichloride and ammonia*, *condensation polymer of triethanolamine and tall oil fatty acid*,
5 *poly(dimethylaminoethylmethacrylate sulfuric acid salt)*, *poly(dimethylaminoethylacrylate methyl chloride quaternary salt)*.

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